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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,405	08/30/2001	Prentice Lee Huffines	TK3615USNA	8575
23906	7590	11/17/2004	EXAMINER	
E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			TORRES VELAZQUEZ, NORCA LIZ	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/942,405	HUFFINES ET AL.	
	Examiner	Art Unit	
	Norca L. Torres-Velazquez	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,7,9,11,12,14,16,18-20,22,26,28,30,32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,7,9,11,12,14,16,18-20,22,26,28,30,32 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 25, 2004 have been fully considered but they are not persuasive.

a. With regards to the limitation "a second moisture vapor permeable nonwoven layer adhered to the second side of the film, wherein said second nonwoven layer is not a powder-bonded layer", Applicants argue that in view of Drelich's teaching of improved properties when laminating a powder-bonded nonwoven layer to a film, those of skill in the art would not have been motivated to further laminate a non-powder bonded nonwoven layer to the opposing side of the film, as presently claimed, since to do so would apparently negate the improvements desired by Drelich. Applicants further submit that Drelich would implicitly teach away from such combination.

It is noted that the Carroll et al. reference is directed to sheet materials for use in applications such as medical drapes, medical gowns, and absorbent articles, such as diapers and sanitary napkins. The reference teaches that due to the physical properties (permeability to moisture vapor, impermeability to liquids, strength and durability), of their composite sheet, it is useful as the outside "backsheet" of a disposable absorbent article. (Col. 11, lines 17-21) The reference teaches the use of the fibrous substrate material to provide an enhanced tactile impression. (Page 26, lines 18-24)

It is further noted that the Drelich reference is directed to fibrous nonwoven fabrics and his invention provides a fabric that possesses washability and superior strength, as well as enhanced textile-like softness and drape. The reference teaches that

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the fabric is adapted for use as lining material for clothing, particularly where such materials may be worn next to the body, for inner or outer wear in general (for example, sanitary napkins, surgical dressings, among others). (Refer to Col. 1, lines 59-72)

Applicants' arguments imply that Drelich teaches improved properties when laminating a powder-bonded nonwoven layer to a film, but the Drelich reference is providing the teaching a powder-bonded nonwoven and the Examiner as combined Drelich teachings with the Carroll et al. reference to provide the laminate of Carroll et al. with such type of nonwoven when enhanced properties such as hand, drape, flexibility, absorbency, are desired. The teaching of Drelich that their nonwoven is adapted to be worn next to the body, for inner or outer wear in general due to the enhanced textile-like softness and drape, provides motivation to use such type of nonwoven in one of the fibrous layers of the laminate structure of Carroll.

It is the Examiner's position that the teachings of Drelich will not teach away from laminating a non-powder-bonded nonwoven layer to a film that has a powder-bonded nonwoven layer (such as the fabric that taught by Drelich), to the opposing side of the film; because the improved properties of the fabric taught by Drelich are inherent to the fabric itself and not to the laminate as implied by Applicants. Therefore, having a non-powder-bonded nonwoven layer on the opposing side of the film will not affect the improved fabric of Drelich. Further, it is noted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the laminate structure of Carroll et al. a powder-bonded nonwoven layer such as the one taught by Drelich in one of the fibrous nonwoven layers, since it has been held to be within the

general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

b. Applicants reiterate their comments in traverse of the rejections as applied to Carroll et al., Drelich and Zimmerman et al. as previously set forth in the last response.

It is noted that while Zimmerman's application/use of nonwovens is directed to making liners for jackets of floppy disks, it does teach use of polyethylene terephthalate fibers for making powder bonded nonwoven fabrics. (Column 4, lines 51-56) The reference teaches the use of their nonwoven in lamination, which is also done by the art taught by CARROLL. (Refer to Column 8, lines 10-14 of ZIMMERMAN) CARROLL et al., DRELICH and ZIMMERMAN et al. are all directed to nonwoven fabrics, and CARROLL et al. and ZIMMERMAN et al. in particular; further teach the use of their nonwoven fabrics in laminated products. Therefore, it is the Examiner's position that these references are all directed to nonwoven fabric construction and are treated as analogous art.

2. Applicant's arguments, see page 3 of the remarks, filed August 25, 2004, with respect to the rejections under 35 U.S.C. 103(a) over Lim et al. in view of Drelich have been fully considered and are persuasive. The rejection of claims 1, 4, 7, 9, 11-12, 14, 16, 18-20, 22, 26, 28, 30, 32, 34 over the Lim et al. in view of Drelich has been withdrawn.

3. Claims 1, 4, 7, 9, 11-12, 14, 16, 18-20, 22, 26, 28, 30, 32 and 34 remain rejected as stated below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 9, 11, 14, 16, 18-19, 20, 28, 30 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. (WO 97/45259) in view of DRELICH (US 2,880,113).

CARROLL et al. discloses sheet materials used in making medical drapes, medical gowns, and absorbent articles, such as diapers and sanitary napkins. (Page 1, lines 18-20). The reference discloses a moisture vapor permeable, substantially liquid impermeable composite sheet material comprising a fibrous substrate and a moisture vapor permeable thermoplastic film layer. The fibrous substrate is comprised of at least 50% by weight polyolefin polymer fibers. The moisture vapor permeable thermoplastic film layer is melt bonded directly to the one side of the fibrous substrate. Preferably the film layer of the composite sheet has an average thickness of less than 50 microns and is comprised of at least 50% by weight of polymer selected from the group of block copolyether esters, block copolyether amides, polyurethanes, and combinations thereof. The reference further teaches that the sheet is also substantially free of micropores (monolithic). The reference further teaches that the film may be bonded between two fibrous substrates. (Page 3, lines 23-38 through Page 4, lines 1-12)

The substrate may be a woven or nonwoven structure with the nonwoven being preferred. (Page 6, lines 30-31) A particularly preferred nonwoven material for the fibrous substrates 14

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and 16 is a fibrous polyolefin nonwoven web. Suitable polyolefin materials include polypropylene and polyethylene spunbonded webs, scrims, woven slit films, carded webs, flashspun webs, and woven or nonwoven sheets comprised of blends of polyolefin fibers or of polyolefin fibers and other fibers. The webs of polyolefin fibers can be made with a variety of desirable properties, including good vapor permeability, flexibility, softness and strength. (Page 7, lines 30-36) The reference further teaches that the composite sheet 10 is prepared by an extrusion coating process. (Page 9, lines 13-14) CARROLL et al. further teaches that if the polymers of the film layer 12 and the substrate 14 are chemically compatible, the polymer of the film layer will wet the polymer of the fibers to a greater extent, which, in turn, improves physical bonding between the layers of the composite sheet. Making the polymers of the moisture permeable film layer and the fibrous substrate more compatible also increases the level of chemical attraction between the layers of the composite sheet. The preferred polyether block copolymer moisture permeable films are compatible with ester-based fibrous substrates, such as polyester webs, and thus adhere well to polyesters. (Page 17, lines 3-14) The reference further teaches the use of the composite sheet as a backsheet in a garment. (Page 24, lines 25-27) It is noted that the Carroll et al. reference is directed to sheet materials for use in applications such as medical drapes, medical gowns, and absorbent articles, such as diapers and sanitary napkins. The reference teaches that due to the physical properties (permeability to moisture vapor, impermeability to liquids, strength and durability), of their composite sheet, it is useful as the outside "backsheet" of a disposable absorbent article. (Col. 11, lines 17-21) The reference teaches the use of the fibrous substrate material to provide an enhanced tactile impression. (Page 26, lines 18-24)

The use of a nonwoven web of fibers, wherein greater than 95 weight percent of the fibers of the nonwoven web are compatible with the polymeric film would have been an obvious result-effective variable in view of CARROLL et al.'s teachings above.

The reference teaches that the composite sheet material of their invention is capable of delivering an MVTR of at least about 1500 g/m²/24 hr. (Page 12, lines 2-30).

With regards to the bond strength between the second nonwoven and the film, it is noted that the CARROLL et al. reference teaches the importance of physical bonding between the film and the substrate layers in the composite sheet and also the importance of the chemical compatibility of the materials (as disclosed above), therefore, a bond strength of at least 50 grams/inch would be an obvious result of the CARROLL et al. teachings. CARROLL et al. discloses a laminate with an intermediate film layer between two nonwoven layers.

However, CARROLL et al. fails to teach the use of powder bonding in one of the nonwoven layers.

DRELICH teaches fibrous nonwoven fabrics and teaches their use in applications such as surgical dressings. The reference teaches the use of powder binders to form a multiplicity of relatively small granule bonds of heat-fused material in the nonwoven. The bonds preferably are formed in the fabric by distributing heat fusible granules substantially uniformly, yet at random, in the fibrous layer, and then fusing them to cause them to flow into or through the thickness of the layer to imbed a relatively large number of fibers. The granules are fused and caused to flow by the application of heat and pressure to form strong bonds, which surround and anchor the fibers. In general, the binder members proposed have been of the same order of size as the fibers to be bonded and in the form of powder or a similar state of fine division. (Column 2, lines 25-

42) DRELICH further teaches that in the fabric of their invention the bonds are spaced sufficiently apart to allow the structural fibers to predominate in determining hand, drape, flexibility, absorbency, and the like. (Column 2, lines 59-63) It is further noted that the Drelich reference is directed to fibrous nonwoven fabrics and his invention provides a fabric that possesses washability and superior strength, as well as enhanced textile-like softness and drape. The reference teaches that the fabric is adapted for use as lining material for clothing, particularly where such materials may be worn next to the body, for inner or outer wear in general (for example, sanitary napkins, surgical dressings, among others). (Refer to Col. 1, lines 59-72)

Since both CARROLL et al. and DRELICH are from the same field of endeavor, they are both directed to nonwoven fabrics, the purpose disclosed by DRELICH would have been recognized by CARROLL et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify one of the nonwoven layers of the composition or laminate of CARROLL et al. and provide it with at least one powder-bonded nonwoven web with the motivation of enhancing the textile-like qualities of the nonwoven fabric properties such as hand, drape, flexibility, absorbency, and the like are desired, while at the same time providing strength to the nonwoven layer as disclosed by DRELICH (Column 2, lines 70-71) and further provide enhanced tactile impression in the layer of the laminate that is worn next to the body. The teaching of Drelich that their nonwoven is adapted to be worn next to the body, for inner or outer wear in general due to the enhanced textile-like softness and drape, provides motivation to use such type of nonwoven in one of the fibrous layers of the laminate structure of Carroll.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. in view of DRELICH.

It is noted that the prior art of reference is silent with respect to the claimed viral barrier test. However, it is reasonable to presume that the claimed property is inherent to the invention of CARROLL et al. in view of DRELICH. Support for said presumption is found in the use of the same starting materials (i.e. non-porous film with a powder-nonwoven sheet), like processes of making the articles (i.e., extrusion coating), and the production of similar end-products (i.e., moisture vapor permeable composite sheets, etc...). The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the presently claimed function of viral barrier would obviously have been provided as a result of the inventive composite of the CARROLL et al. reference. *Note In re Best*, 195 USPQ 433.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. (WO 97/45259) in view of DRELICH (US 2,880,113) as applied to claim 1 above, and further in view of ZIMMERMAN et al. (US 4,845,583).

While CARROLL et al. teaches that suitable polyolefin materials for the nonwoven web layer include polypropylene and polyethylene spunbonded webs, and DRELICH teaches powder-bonded nonwovens; the prior art of reference fails to teach that use of poly (ethylene terephthalate), poly (1,3-propylene terephthalate) and copolymers thereof in the powder-bonded nonwoven layer.

ZIMMERMAN et al. teaches the use of powder bonded nonwoven fabrics as liners for jackets for retaining "floppy" diskettes or disks. (Abstract) The reference teaches that by using a powder bonded nonwoven fabric, improvements in lamination around cutouts in the diskette or

disk jackets or cartridges, and in cleanliness are achieved. (Column 4, lines 1-4) The reference teaches the use of polyethylene terephthalate fibers for making the nonwoven fabrics. (Column 4, lines 51-56)

Since CARROLL et al., DRELICH and ZIMMERMAN et al. are directed to nonwoven fabric constructions, the purpose disclosed by ZIMMERMAN et al. would have been recognized in the pertinent art of CARROLL et al. and DRELICH.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the powder-bonded nonwoven layer and provide it with polyethylene terephthalate fibers as an alternate fiber to the ones taught by CARROLL et al. with the motivation of improving the lamination and fiber retention of the fabric as disclosed by ZIMMERMAN et al. (above).

8. Claims 20, 22, 24, 26 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. in view of DRELICH as stated above.

It is noted that the claimed protective cover for automobiles, the house wrap, the roof liner and the clean room garment include all the structural limitations taught by the prior art of reference as stated above. The claimed products are preamble limitations, and no further structural limitations are claimed. Therefore, claims 20-27 and 32-33 are rejected as stated above.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

SEAL (US 4,857,065) – teaches the use of powder-bonded nonwoven in an absorbent product. (Col. 1, lines 41-47; Col. 3, lines 22-27, line 52)


10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Norca L. Torres-Velazquez
Examiner
Art Unit 1771

November 4, 2004